Attorney Docket No. P15306-US1
Customer Number 27045

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently Amended) An architecture for a communications node in a telecommunications network, said node performing a plurality of call-control functions using ~~an operating system and~~ a single physical platform, said architecture comprising:

a plurality of ~~application-level~~ application-specific logic blocks, each of the application-specific logic blocks performing application-level logic corresponding to one of the plurality of call-control functions; and

~~a common~~ an engine module interfaced with and supporting all of the ~~application-level~~ application-specific logic blocks, said engine module comprising:

a plurality of functional blocks, selected ones of said functional blocks being operable to perform selected ones of the call-control functions when interfaced with selected ones of the ~~application-level~~ application-specific logic blocks; ~~and~~

at least one mapping table that selectively interfaces ~~the plurality of application-level~~ selected application-specific logic blocks with the plurality of functional blocks in the common engine module, and selects appropriate functional blocks for matching with ~~the application-level~~ each application-specific logic ~~blocks~~ block to create a specific call-control function; and

an operating system supporting all of the functional blocks and application-specific logic blocks.

2. (Currently Amended) The architecture for a communications node of claim 1 wherein the mapping table includes groups of network addresses for ~~application-level~~ application-specific logic blocks and for functional blocks in the ~~common~~ engine module, each of said groups of addresses identifying a selected ~~application-level~~ application-specific logic block and at least one functional block in the ~~common~~ engine module that

together perform the call-control function corresponding to the selected ~~application-level~~ application-specific logic block.

3. (Currently Amended) The architecture for a communications node of claim 2 further comprising:

a plurality of servlet Application Programming Interfaces (APIs) that are operable to provide a plurality of supplementary user services; and

a servlet manager interfaced with the plurality of servlet APIs and with the plurality of ~~application-level~~ application-specific logic blocks, said manager being operable to provide selected ones of the supplementary user services to any one of the ~~application-level~~ application-specific logic blocks.

4. (Currently Amended) The architecture for a communications node of claim 1 wherein the telecommunications network utilizes call-control signaling based on the Session Initiation Protocol (SIP), and the plurality of ~~application-level~~ application-specific logic blocks include logic blocks for a Call State Control Function (CSCF).

5. (Currently Amended) The architecture for a communications node of claim 4 wherein the plurality of functional blocks in the ~~common~~ engine module include a plurality of SIP behavior functions and a SIP stack that performs reliability and error-checking functions associated with signal communications with the communications node.

6. (Original) The architecture for a communications node of claim 5 wherein the plurality of SIP behavior functions includes a proxy function, a User Agent Server (UAS) function, and a User Agent Client (UAC) function.

7. (Currently Amended) The architecture for a communications node of claim 5 wherein at least one of the ~~application-level~~ application-specific logic blocks includes a Registrar SIP behavior function.

8. (Original) The architecture for a communications node of claim 5 wherein the SIP stack includes a plurality of portable units, said portable units including:

a transaction manager;

a parser; and

a utility package.

9. (Currently Amended) An architecture for a Call State Control Function (CSCF) node in a Session Initiation Protocol (SIP) telecommunications network, said node selectively performing call-control functions of a Proxy CSCF (P-CSCF), an Interrogating CSCF (I-CSCF), and a Serving CSCF (S-CSCF), ~~said architecture being implemented on top of a single operating system and a single physical platform,~~ said architecture comprising:

a plurality of application-specific logic blocks, each of the application-specific logic blocks performing application-level logic corresponding to a different call-control function, said application-specific logic blocks including:

an ~~application-level~~ application-specific logic block corresponding to the P-CSCF;

an ~~application-level~~ application-specific logic block corresponding to the I-CSCF; and

an ~~application-level~~ application-specific logic block corresponding to the S-CSCF; and

~~a common~~ an engine module interfaced with and supporting all of the ~~application-level~~ application-specific logic blocks, said engine module implemented on top of a single operating system and a single physical platform, and comprising:

a plurality of SIP behavior functions and a plurality of SIP stack functions, selected SIP behavior functions and selected SIP stack functions being operable to perform the functions of a P-CSCF, I-CSCF, or S-CSCF when interfaced with an appropriate ~~application-level~~ application-specific logic block corresponding to the P-CSCF, I-CSCF, or S-CSCF; and

at least one mapping table that interfaces the plurality of ~~application-level~~ application-specific logic blocks with the plurality of SIP behavior functions and the SIP

stack, and selects appropriate SIP behavior functions and SIP stack functions for matching with the ~~application-level~~ application-specific logic blocks to selectively create a P-CSCF, an I-CSCF, or an S-CSCF.

10. (Currently Amended) The architecture for a CSCF node of claim 9 further comprising:

a plurality of servlet Application Programming Interfaces (APIs) that are operable to provide a plurality of supplementary user services; and

a servlet manager interfaced with the plurality of servlet APIs and with the ~~application-level~~ application-specific logic blocks, said manager being operable to provide selected ones of the supplementary user services to any one of the ~~application-level~~ application-specific logic blocks.

11. (Currently Amended) The architecture for a CSCF node of claim 9 wherein the plurality of SIP behavior functions in the ~~common~~ engine module includes a proxy function, a User Agent Server (UAS) function, and a User Agent Client (UAC) function.

12. (Currently Amended) The architecture for a CSCF node of claim 9 wherein at least one of the ~~application-level~~ application-specific logic blocks includes a Registrar SIP behavior function.

13. (Currently Amended) A method of implementing a communications node in a telecommunications network, said node performing a plurality of Session Initiation Protocol (SIP) call-control functions using a single operating system and a single physical platform, said method comprising the steps of:

providing a plurality of ~~application-level~~ application-specific logic blocks, each of the application-specific logic blocks performing application-level logic corresponding to one of the plurality of call-control functions;

assigning a network logic-block address to each of the ~~application-level~~ application-specific logic blocks;

interfacing with the ~~application-level~~ application-specific logic blocks, ~~a common~~ an engine module that supports all of the application-specific logic blocks, said engine module comprising a mapping table, a plurality of SIP stack functions, and a plurality of SIP call-control behavior functions;

assigning a network address to each of the SIP stack functions and call-control behavior functions;

implementing the ~~application-level~~ application-specific logic blocks, and the ~~common~~ engine module on top of the single operating system and the single physical platform;

storing in the mapping table, the logic-block addresses, SIP stack function addresses, and behavior function addresses; and

identifying in the mapping table, a plurality of interface groups, each interface group comprising a set of addresses associated with one selected ~~application-level~~ application-specific logic block and at least one of the SIP stack functions and call-control behavior functions that, together, perform the call-control function corresponding to the selected ~~application-level~~ application-specific logic block.

14. (Currently Amended) The method of implementing a communications node of claim 13 further comprising the steps of:

providing a plurality of servlet Application Programming Interfaces (APIs) that are operable to provide a plurality of supplemental user services; and

interfacing a servlet manager with the plurality of servlet APIs and with the ~~application-level~~ application-specific logic blocks, said manager being operable to provide selected ones of the supplemental user services to any one of the ~~application-level~~ application-specific logic blocks.

15. (Currently Amended) The method of implementing a communications node of claim 13 wherein the plurality of SIP call-control behavior functions in the ~~common~~ engine module includes a proxy function, a User Agent Server (UAS) function, and a User Agent Client (UAC) function.

16. (Currently Amended) The method of implementing a communications node of claim 15 further comprising the step of implementing a SIP Registrar behavior function in at least one of the ~~application-level~~ application-specific logic blocks.

17. (Currently Amended) An architecture for a communications node in a Session Initiation Protocol (SIP) telecommunications network, said node performing a plurality of call-control functions ~~using a common operating system~~ and being implemented on a single physical platform, said architecture comprising:

~~means for~~ a plurality of application-specific logic blocks, each of the application-specific logic blocks performing application-level logic corresponding to one of the plurality of call-control functions;

a plurality of SIP functional blocks for performing SIP behavior-handling functions common to the plurality of call-control functions;

means for selectively interfacing ~~a plurality of~~ the SIP functional blocks with ~~the~~ selected ~~application-level~~ application-specific logic blocks, wherein selected ~~ones of said~~ combinations of SIP functional blocks ~~being~~ and application-specific logic blocks are operable to perform selected ones of the call-control functions ~~when interfaced with selected ones of the application-level logic blocks~~; and

~~means for mapping into groups, the plurality of application-level logic blocks and the plurality of SIP functional blocks, each of said groups defining a different one of the plurality of call-control functions performed by the node~~

an operating system supporting all of the SIP functional blocks and application-specific logic blocks.

18. (New) The architecture of claim 17, wherein the means for selectively interfacing the SIP functional blocks with selected application-specific blocks includes means for mapping into groups, the plurality of application-specific logic blocks and the plurality of SIP functional blocks, each of said groups defining a different one of the plurality of call-control functions performed by the node.

19. (New) The architecture of claim 17, wherein each of the plurality of application-specific logic blocks performs application-level logic corresponding to a call-control function selected from a group consisting of:

a Proxy Call State Control Function (P-CSCF);

an Interrogating Call State Control Function (I-CSCF);

a Serving Call State Control Function (S-CSCF);

a Media Resource Control Function (MRCF); and

a Border Gateway Control Function (BGCF).